

Technology Education Standards Rationale

Technology encompasses the tools and strategies for solving problems, using information, increasing productivity and enhancing personal growth. The word *technology* summons an image of a variety of tools ranging from shovels to gene splitters. When asked to develop the original Technology Standards, adopted in 1997, the Committee did so without the benefit of seeing the integration of various technologies into other curricular standards. Over the past four years, significant advances in technology have occurred. These changes have caused many national organizations to review what students need to know and be able to do in relation to technology. Therefore, when asked to review the current standards, the Revision Committee examined national standards (National Educational Technology Standards, Information Power, Information Technology in Education and Technology for All Americans), along with current Arizona standards. The Revision Committee also analyzed current research on technology skills important to business and industry. The Revision Committee reviewed technology that is currently integrated into other content area standards with the vision that as other standards are revised, technology will be seamlessly integrated.

The goal is to help students live, learn and work successfully and responsibly in an increasingly complex, technology-driven society. These Technology Standards are designed to provide foundational skills and processes that students need in order to work productively and creatively in their studies, at work and at home. Research on the transfer of learning strongly supports the position that instruction and educational activities should closely parallel the final desired behavior. It is essential that technology instruction be an integral part of a student's educational experience. Education's role is to help students meet the challenge of the future. Arizona must encourage, assist and provide all students with the required tools and instruction to enable them to acquire knowledge, develop skills and apply these tools successfully in our world.

The following definition of technology is supported in this document:

Technology is the application of tools to solve problems that extend human potential for the benefit of society

Table 1: Technology Education Standards

STANDARD 1: Fundamental Operations and Concepts

Students understand the operations and function of technology systems and are proficient in the use of technology.

STANDARD 2: Social, Ethical and Human Issues

Students understand the social, ethical and human issues related to using technology in their daily lives and demonstrate responsible use of technology systems, information and software.

STANDARD 3: Technology Productivity Tools

Students use technology tools to enhance learning, to increase productivity and creativity and to construct technology-enhanced models, prepare publications and produce other creative works.

STANDARD 4: Technology Communications Tools

Building on productivity tools, students will collaborate, publish, and interact with peers, experts and other audiences using telecommunications and media.

STANDARD 5: Technology Research Tools

Students utilize technology-based research tools to locate and collect information pertinent to the task, as well as evaluate and analyze information from a variety of sources.

STANDARD 6: Technology as a Tool for Problem Solving and Decision-making

Students use technology to make and support decisions in the process of solving real-world problems.